1. **General Description of Data to be Managed**
    1. Name of the Dataset or data collection project [→ gmd:title].

       ## Coastal Change Analysis Program Regional Land Cover

    2. Keywords that could be used to characterize the data, and vocabulary from which those keywords were obtained (e.g., GCMD, CF Conventions, etc.) [→ gmd:MD_Keywords]
        - **Coastal Change Analysis Program**
        - **C-CAP**
        - **Change Detection Analysis**
        - **Coastal wetlands**
        - **Coastal intertidal areas**
        - **US coastline**
        - **land cover**
        - **land cover change**
        - **coastal zone**
        - **change detection**
        - **satellite image classification**
        - **landscape**
        - **habitat**
        - **environmental monitoring**

    3. Summary description of the data to be generated [→ gmd:abstract].
       The Coastal Change Analysis Program (C-CAP) produces a nationally standardized database of land cover and land change information for the coastal regions of the U.S. C-CAP products provide inventories of coastal intertidal areas, wetlands, and adjacent uplands with the goal of monitoring these habitats by updating the land cover maps every five years. C-CAP products are developed using multiple dates of remotely sensed imagery and consist of raster-based land cover maps for each date of analysis, as well as a file that highlights what changes have occurred between these dates and where the changes were located.
    4. Anticipated temporal coverage of the data [→ gmd:EX_TemporalExtent].
       1992, 1996, 2001, 2006, and 2011 in progress (vary by location)
    5. Anticipated geographic coverage of the data [→ gmd:EX_Extent]
       Coastal intertidal areas, wetlands, and adjacent uplands of the contiguous U.S., Puerto Rico, the U.S. Virgin Islands, Hawaii, and the Pacific Islands territories
    6. What data types will you be creating or capturing? (e.g., digital numeric data, photographs, video, acoustic records, database tables, spreadsheets, paper records, physical samples, etc.)
       Digital images in the following formats: IMG, GeoTIFF, GoogleEarth KMZ, map services
    7. How will you capture or create the data? (e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, etc.)
       Use existing satellite imagery and aerial photography and process this imagery with documented, repeatable procedures using standard data sources and including extensive field sampling, validation, and standard quality-control review procedures.
    8. Where will this plan be stored electronically besides in the NOAA DMP Repository
       File system for CSC Data Management Plans on NOAA Google Documents

9. What volume of data is anticipated to be collected in the Project Time Frame?
   10 GB

10. Will the data contain Personally Identifiable Information or any information whose distribution may be restricted by law or national security?
    No.

2. **Points of Contact** (Give name, title, location, e-mail address, phone number and mailing address, as appropriate.) [→ gmd:CI_ResponsibleParty]
   1. Who can, or could, represent this data collection project on NOAA's Data Management Integration Team (DMIT)? Current members of DMIT are listed at https://geo-ide.noaa.gov/wiki/index.php?title=DMIT_Membership.
      Anne Ball, anne.ball@noaa.gov

   2. Who is the overall point of contact for the data collection?
      Nate Herold, nate.herold@noaa.gov

   3. Who is responsible for verifying the quality of the data?
      Nate Herold, nate.herold@noaa.gov

   4. Who is responsible for answering questions about the data collection?
      Nate Herold, nate.herold@noaa.gov

   5. Who is responsible for data documentation and metadata activities?
      Project metadata manager: Erik Hund, erik.hund@noaa.gov

      CSC metadata manager: Anne Ball, anne.ball@noaa.gov

      The CSC metadata manager is responsible for making sure the metadata meets format and content standards. The project metadata manager is responsible for ensuring the information in the metadata is correct.

      Two levels of metadata are created for this dataset:

      - **Parent or discovery metadata is created to describe the entire suite of data. Regional metadata records are created to describe data available within regions and specific time frames.**
      - **Use metadata is created for downloadable data. The project metadata manager is responsible for content and format for all of these records. These records are not published in the NOS Data Explorer, geoplatform.gov or data.gov.**

      Discovery level metadata is published via the NOS Data Explorer, geoplatform.gov and/or data.gov and is reviewed by the CSC metadata manager to ensure it meets CSC, NOS, NOAA and federal requirements for valid content and format.

   6. Who is responsible for the data storage and data disaster recovery activities?
      The Information Technology (IT) program at CSC is responsible for data disaster recovery activities. This includes regular backups and off-site storage of all CSC data and applications.

   7. **W**ho is responsible for ensuring adherence to this data management plan, including ensuring that appropriate resources are available to implement the data management plan?
      CRS Program Manager

3. **Data Stewardship**
    1. What quality control procedures will be employed?
       Produced through documented, repeatable procedures using standard data sources and include extensive field sampling, validation, and standard quality-control review procedures.
    2. What is the overall lifecycle of the data from collection or acquisition to making it available to customer?
       Data is produced every five years and historical data is retained and made available for longer term studies.

4. **Data Documentation**
    1. Which metadata repository will be used to document this data collection?
       Metadata are available through the following systems:
        - **CSC Digital Coast**
        - **MERMAid**
        - **NOS Data Explorer**
        - **Data.gov**
        - **Geodata.gov**
    2. In addition to discovery-level metadata, what additional metadata or other documentation is necessary to fully describe the data and ensure its long-term usefulness? How will that metadata be collected and updated?" Is there a requirement to document this data collection in other metadata repositories?
        - **Metadata records contain both discovery and use information. Additional documentation (linked to within the metadata) is available through the C-CAP web page at http://www.csc.noaa.gov/digitalcoast/data/ccapregional/. Additional publications regarding CCAP data are available at http://www.csc.noaa.gov/digitalcoast/data/ccapregional/support/ and are cited within the metadata.**
        - **Metadata is reviewed and updated every two years.**
        - **There are no requirements to document the data in any repositories other than those already mentioned in 4.1.**
    3. What standards will be used to represent data and metadata elements in this data collection. Note: The EDMC Data Documentation Procedural Directive calls for the use of ISO 19115 and related standards for data documentation.
       Metadata was originally written in the FGDC CSDGM format and is being converted to ISO 19115. Future records will be written using the ISO 19115 format.

5. **Data Sharing**
    1. Will the data be made available to the public? If so, what is the expected date of first availability? Is this a one-time data collection, or an ongoing series of measurements? Will there be a Principal Investigator hold or other delay between data collection and publication, and if so for how long? [Note: the NOAA Data Sharing Policy for Grants and Cooperative Agreements, which is currently under development, provides useful guidance for sharing data in a timely manner.]
        - **The data has been available to the public since 1992.**
        - **This is an ongoing project that is updated every 5 years.**
        - **There is no hold or delay between data processing and publication**

2. If the data are not to be made available to the public, explain why and under what authority distribution may be restricted. NOAA policy states that Environmental data will be visible, accessible and independently understandable to users, except where limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements.[1]
   N/A
3. Will users be subject to any access conditions or restrictions, such as submission of non-disclosure statements, special authorization, or acceptance of a licensing agreement?
   No.
4. What data access protocols will be used to enable data sharing? The use of open-standard, interoperable, non-proprietary web services is recommended (for example, OPeNDAP, or Open Geospatial Consortium (OGC) web services).
   Open standards are used for data sharing. The data may be accessed via web pages, ftp sites, and web services.
5. In what catalogs will these services or data be made registered to enable discovery by users and other Catalogs?
   - **NOS Data Explorer**
   - **Digital Coast**
   - **NOAA Geoplatform**
   - **Data.gov**
   - **Geodata.gov**

6. **Initial Data Storage and Protection**
   1. Where and how will the data be stored initially (i.e., prior to being sent to a long-term archive facility)?
      Data is stored at CSC.
   2. How will the data be protected from accidental or malicious modification or deletion? Discuss data back-up, disaster recovery/contingency planning, and off-site storage relevant to the data collection.
      - **The data is protected using standard NOAA security practices**
      - **The data is backed up on a regular schedule**
      - **Copies of the data are held off site per disaster recovery requirements**
   3. If there will be limitations to data access, how will these data be protected from unauthorized access? How will access permissions be managed? What process is to be followed in the event of unauthorized access?
      N/A

7. **Long-Term Archiving and Preservation**
   Note: NOAA's "What-to-archive" policy[2] describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

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[1] NOAA Administrative Order 212-15, "Management of Environmental Data and Information" (2010), https://www.nosc.noaa.gov/EDMC/internal/nao_212-15.php.

[2] NOAA Procedure for Scientific Records Appraisal and Archive Approval: Guide for Data Managers (2008), https://www.nosc.noaa.gov/EDMC/internal/NOAA_Procedure_document_final_12-16-1.pdf.

1. In what NOAA Data Center (NODC, NCDC, NGDC) will the data be archived and preserved? Have you begun discussions with that Data Center regarding your intended submission?
   - **The data is currently archived at NODC**
   - **There is an agreement in place with NODC for continued archiving in the future**
2. If you have not identified a NOAA Data Center, what is your long-term strategy for maintaining, curating, and archiving the data?
   N/A
3. How will the costs of long-term data archiving be provided and maintained?
   N/A

4. What transformations or procedures will be necessary to prepare data for preservation or sharing? (e.g., quality control, format conversion, anonymization of personally-identifiable information, etc.). What related information will be submitted to the archive to enable future use and understanding of the data [e.g., metadata, references, reports, research papers, algorithms, audio or video codecs, special character sets or fonts, etc.]) .
   - **There are no additional requirements necessary for preservation**
   - **Data for archiving is submitted with all existing documentation including metadata**

   Identify the Record Schedule applicable to these data and provide the retention time for these data.

   N/A See NODC for any requirements